

# Patients hospitalized with COVID-19 less likely to be vaccinated

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Patients with COVID-19 hospitalization and disease progression to death

or mechanical ventilation are significantly less likely to be vaccinated with an mRNA COVID-19 vaccine, according to a study published online Nov. 4 in the *Journal of the American Medical Association*.

Mark W. Tenforde, M.D., Ph.D., from the U.S. Centers for Disease Control and Prevention COVID-19 Response Team in Atlanta, and colleagues examined the correlation between mRNA COVID-19 vaccination with mRNA-1273 and BNT162b2 and COVID-19 hospitalization. Data were included for 4,513 adults hospitalized between March 11 and Aug. 15, 2021, including 1,983 case patients with COVID-19 and 2,530 controls without COVID-19.

The researchers found that 84.2 percent of COVID-19 hospitalizations were among unvaccinated patients. There was a significant correlation observed for hospitalization for COVID-19 with a decreased likelihood of vaccination (cases, 15.8 percent; controls, 54.8 percent; adjusted odds ratio, 0.15), including for the sequenced alpha and delta variants (adjusted odds ratios, 0.10 and 0.14, respectively). The correlation was stronger for immunocompetent versus immunocompromised patients (adjusted odds ratio, 0.10 versus 0.49) and was weaker at more than 120 days since vaccination with BNT162b2 versus mRNA-1273 (adjusted odds ratios, 0.36 versus 0.15, respectively). Death or invasive mechanical ventilation by day 28 correlated with a reduced likelihood of vaccination among the 1,197 patients hospitalized with COVID-19 (adjusted odds ratio, 0.33).

"Vaccination with an mRNA COVID-19 [vaccine](#) was significantly less likely among patients with COVID-19 than other conditions and among those with COVID-19 who progressed to [death](#) or [mechanical ventilation](#) than those with COVID-19 who did not have [disease progression](#)," the authors write.

Several authors disclosed financial ties to the pharmaceutical industry.

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